

The epidemiology and survival of oesophago-gastric cancers in England, 1998-2006

VH Coupland¹, W Allum², M Novelli³, KM Linklater¹, H Møller¹, EA Davies¹

¹Thames Cancer Registry, ²Royal Marsden Hospital, ³University College London

Objective

The aim of this study was to describe the incidence and one- and five-year survival of oesophago-gastric (OG) cancers in England.

Methods

Data on 118,996 patients (75,820 males; 43,176 females) with OG cancer (ICD10 C15-C16) diagnosed in England between 1998 and 2006 were extracted from the National Cancer Repository Dataset. Four sub-groups were defined; upper oesophagus (UO), gastrooesophageal junction (including cardia) (GOJ), stomach (excl cardia) and oesophagus not known (ONK). Age-standardised incidence rates (per 100,000 European standard population), ASR(E), were calculated by sex, socioeconomic deprivation, primary care trust and cancer network of residence. Incidence rates were displayed using maps to assess variation between primary care trusts and cancer networks by sex. One- and five-year survival was calculated for each cancer group nationally and for individual cancer networks with the Kaplan-Meier method. Follow-up was to the end of 2006.

Results

GOJ and stomach (excl cardia) cancer were the largest groups, each accounting for around 40% of the patients (Table 1). Between 1998 and 2006 the incidence of stomach (excl cardia) and ONK cancer decreased while that for UO and GOJ cancer remained stable (Figure 1). In all four groups the incidence was higher in more deprived areas (Figure 2). The incidence was higher in males than females in each group. The most distinct geographical pattern was for patients with stomach (excl cardia) cancer. London, the north and the middle of England had the highest incidence rates (Map 1a,b). Merseyside & Cheshire and Greater Manchester & Cheshire Cancer Networks had a high incidence compared to the English average for all four OG cancer groups. The survival for each cancer group was poor with one-year survival ranging from 37.3% for GOJ cancer to 14.7% for ONK cancers (Table 1). Five-year survival ranged from 12.0% to 4.0% (Table 1). There appeared to be some variation in survival between cancer networks for stomach (excl cardia) cancer in each sex (Map 2a,b). Significant heterogeneity was found between cancer networks ($p < 0.0001$) which also remained following adjustment for age, sex and deprivation ($p < 0.0001$).

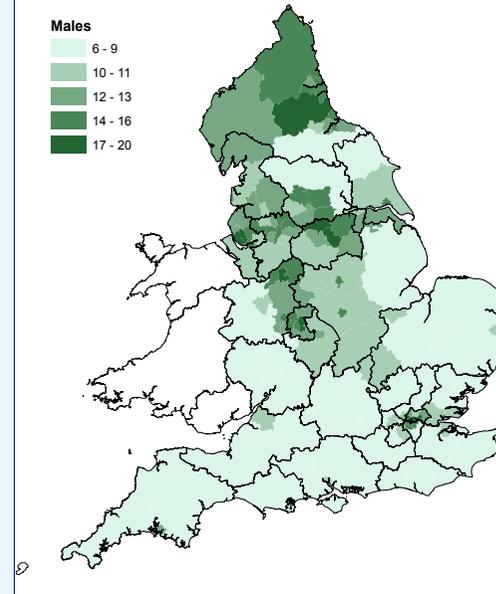
Conclusions

There is some variation in the incidence and survival of OG cancers between cancer networks in England. Further investigation will consider the influence of demographic factors on incidence rates, and the effect of patient case-mix and treatment on survival differences.

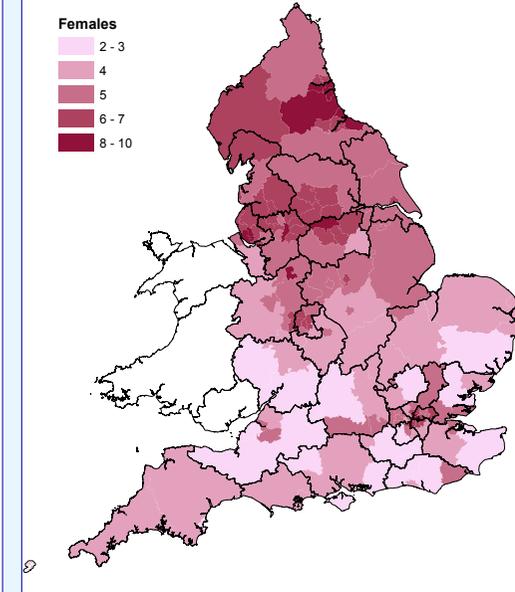
Table 1: Number of cases, one- and five-year survival (%) for OG cancer groups, England, 1998-2006

OG cancer group	Males	Females	Persons	(%)	One-year survival	Five-year survival
Upper oesophagus	7,349	8,867	16,216	(13.6)	30.0%	8.4%
Gastrooesophageal junction	35,911	12,454	48,365	(40.6)	37.3%	9.9%
Stomach (excl cardia)	28,866	18,756	47,622	(40.0)	32.2%	12.0%
Oesophagus not known	3,694	3,099	6,793	(5.7)	14.7%	4.0%
All OG cancers	75,820	43,176	118,996			

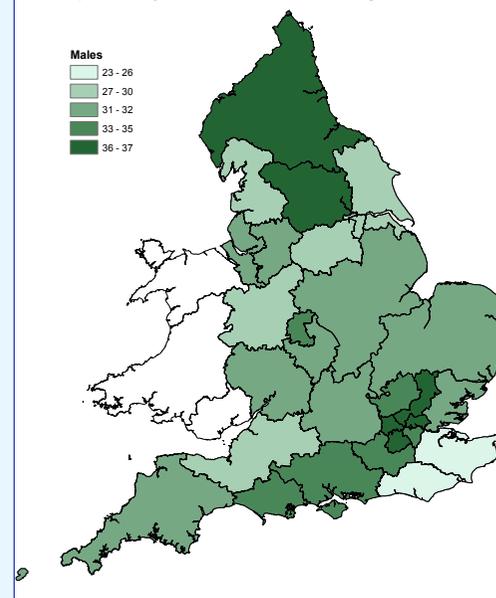
Map 1a: Incidence of stomach (excl cardia) cancer (per 100,000 Euro pop) by primary care trust, males, England, 1998-2006



Map 1b: Incidence of stomach (excl cardia) cancer (per 100,000 Euro pop) by primary care trust, females, England, 1998-2006



Map 2a: One-year survival (%) of stomach (excl cardia) cancer patients by cancer network, males, England, 1998-2006



Map 2b: One-year survival (%) of stomach (excl cardia) cancer patients by cancer network, females, England, 1998-2006

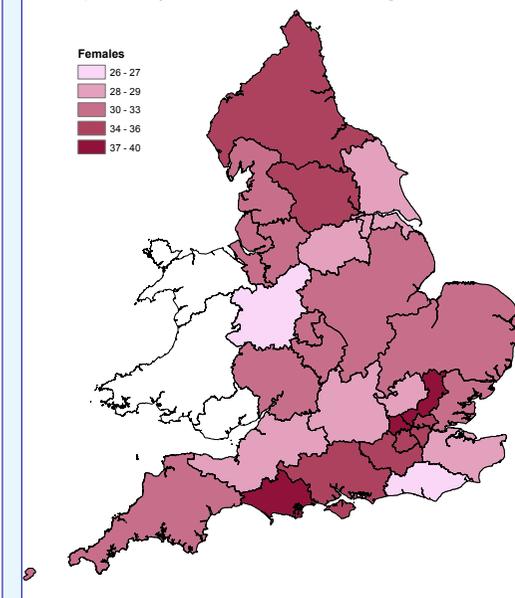


Figure 1: Incidence of OG cancers (per 100,000 Euro pop) by year of diagnosis, persons, England, 1998-2006

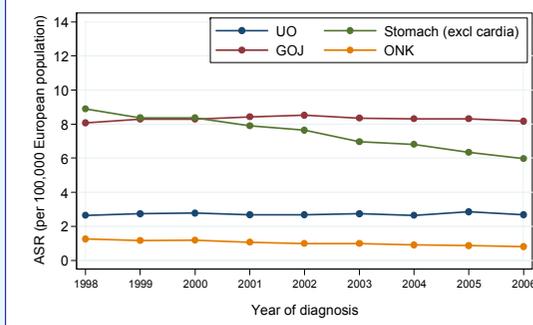


Figure 2: Incidence of OG cancers (per 100,000 Euro pop) by socioeconomic deprivation, persons, England, 2002-2006

